21850

National Library of Canada | Bibliothèque nationale du Canada

CANADIAN THESES ON MICROFICHE | THÈSES CANADIENNES SUR MICROFICHE

NAME OF AUTHOR/*NOM DE L'AUTEUR* Marilyn Mae Ingo

TITLE OF THESIS/*TITRE DE LA THÈSE* Rural and Urban Adolescents and Anxiety

UNIVERSITY/*UNIVERSITÉ* U. of Alberta

DEGREE FOR WHICH THESIS WAS PRESENTED/*GRADE POUR LEQUEL CETTE THÈSE FUT PRÉSENTÉE* M. Ed.

YEAR THIS DEGREE CONFERRED/*ANNÉE D'OBTENTION DE CE DEGRÉ* 1974

NAME OF SUPERVISOR/*NOM DU DIRECTEUR DE THÈSE* Dr. E. E. Fox

Permission is hereby granted to the NATIONAL LIBRARY OF CANADA to microfilm this thesis and to lend or sell copies of the film.

The author reserves other publication rights, and neither the thesis nor extensive extracts from it may be printed or otherwise reproduced without the author's written permission.

L'autorisation est, par la présente, accordée à la BIBLIOTHÈQUE NATIONALE DU CANADA de microfilmer cette thèse et de prêter ou de vendre des exemplaires du film.

L'auteur se réserve les autres droits de publication; ni la thèse ni de longs extraits de celle-ci ne doivent être imprimés ou autrement reproduits sans l'autorisation écrite de l'auteur.

DATED/*DATÉ* June 28/74 SIGNED/*SIGNÉ* Marilyn Ingo

PERMANENT ADDRESS/*RÉSIDENCE FIXÉ* #9-8805-111th St.
Edmonton, Alberta.
T6G 1H9

NL-91 (11-73)

THE UNIVERSITY OF ALBERTA

RURAL AND URBAN ADOLESCENTS AND ANXIETY

by

MARILYN MAE INGO

(C)

A THESIS

SUBMITTED TO THE FACULTY OF GRADUATE STUDIES AND RESEARCH

IN PARTIAL FULFILMENT OF THE REQUIREMENTS FOR THE DEGREE

OF MASTER OF EDUCATION

DEPARTMENT OF EDUCATIONAL PSYCHOLOGY

EDMONTON, ALBERTA

FALL, 1974

THE UNIVERSITY OF ALBERTA

FACULTY OF GRADUATE STUDIES AND RESEARCH

The undersigned certify that they have read, and recommend to the Faculty of Graduate Studies and Research, for acceptance, a thesis entitled "Rural and Urban Adolescents and Anxiety", submitted by Marilyn Mae Ingo, in partial fulfilment of the requirements for the degree of Master of Education.

.....
Supervisor

.....

.....

Date June 28, 1974

ABSTRACT

The present investigation was conducted to determine if differing levels of anxiety exist in samples of rural and urban adolescents. Three dependent variables were considered: urban and rural residence, sex and ordinal position in the family.

The IPAT Anxiety Scale Questionnaire was administered to a sample consisting of 100 urban youths from an Edmonton inner city high school and 100 youths from two rural Alberta schools. There were 109 female subjects and 91 male subjects. Of these, 72 subjects reported that they were first-born and 128 were later-born.

The IPAT Anxiety Scale scores for the five factor components of anxiety, the covert and overt scores and the total score were calculated. The results of a three-way analysis of variance procedure indicated that urban youths scored significantly higher ($p = <.05$) than did rural youths on the following IPAT sub-scales: Ego Weakness, Id Pressure and Overt Anxiety. Female subjects scored significantly higher than did male subjects on the Guilt Proneness scale, Id Pressure scale, Overt Anxiety scale and on the total score. There were no significant differences between first-born and later-born subjects.

It was concluded that urban adolescents score higher on a greater number of anxiety factors than do those who reside in rural areas. Also, female subjects exhibit greater anxiety than do male subjects. Implications for further research into the causal factors associated with these differences in anxiety levels were discussed.

ACKNOWLEDGEMENTS

To Dr. E. E. Fox for his help and direction throughout my studies.

To my fellow graduate students who supported and encouraged me.

TABLE OF CONTENTS

CHAPTER		PAGE
I.	INTRODUCTION	1
II.	REVIEW OF RELATED LITERATURE	7
	Related Theoretical Formulations	8
	The Psychoanalytic Approach to Anxiety	8
	The Existential Approach to Anxiety	10
	The Physiological Approach to Anxiety	11
	The Social Learning Approach to Anxiety	12
	Related Research	15
	Sex and Anxiety	19
	Ordinal Position and Anxiety	20
	Hypotheses	21
III.	DESIGN AND PROCEDURE	22
	The Sample	22
	The Instrument	22
	Procedure	26
	Analysis	27
IV.	FINDINGS AND CONCLUSIONS	28
	Hypothesis I	28
	Hypothesis II	29
	Hypothesis III	30
V.	DISCUSSION AND IMPLICATIONS	32
	Implications for Further Research	33
BIBLIOGRAPHY		35
APPENDIX		39

LIST OF TABLES

TABLE	DESCRIPTION	PAGE
I	Item Composition of the IPAT Anxiety Scale.	.23
II	Mean Scores for Urban and Rural Subjects on the IPAT Anxiety Scale	.28
IIA	Summary, Analysis of Variance of Scores of Urban and Rural Subjects on all IPAT Anxiety Scales.	.28A
III	Mean Scores for Male and Female Subjects on the IPAT Anxiety Scale	.29
IIIA	Summary, Analysis of Variance of Scores of Male and Female Subjects on all IPAT Anxiety Scales.	.29A
IV	Mean Scores for First-Born and Later-Born Subjects on the IPAT Anxiety Scale.	.31
IVA	Summary, Analysis of Variance of Scores of First-Born and Later-Born Subjects on all IPAT Anxiety Scales	.31A

CHAPTER I

INTRODUCTION

"I'm looking for someone to change my life,
I'm looking for a miracle in my life."

These words kept repeating in Jason's head. The tune was catchy and he had always liked the Moody Blues who had written the song. Now a local rock band were on stage at his high school performing selections of the Moody Blues at a noon hour concert. Hundreds of students were twisting, turning, wriggling and swaying all over the gym floor to the heavy beat of the band. Jason was with a group of friends and he, too, was bobbling up, down and around to the sounds. Jason enjoyed the exercise of dancing but he sometimes wondered if he would become deaf from the repeated subjection to 125 decibels of sound blaring in his ears.

Jason Slick is a fifteen year old youth residing in downtown Edmonton and today is just another school day. It began at 8:43 a.m. when Jason groaned and rolled over to silence his alarm clock. As usual, he had to hurry so he neglected washing and donned yesterday's clothes. On the run he arrived in the kitchen, stopped at the fridge to gulp down a glass of milk and raced out the door. He ran two blocks and arrived at the school steps just as the 9 o'clock bell sounded. He ascended the steps three at a time.

Fortunately, Jason's Grade ten home room is on the first floor so he will make it on time. Inside the classroom there is mass confusion: desks are scattered all over and a general look of disorder prevails. Jason sits in a desk while the teacher surveys the room and makes the appropriate marks on the attendance sheets. A few announcements about

parking, littering and a coming concert are boomed out over the loud-speaker and thus ends the opening of another school day.

Jason joins a group of boys as they leave the home room and wend their way down the long corridors to an English class. This class is like all the others: a lady is at the front of the room holding a book and describing some ancient hero. Jason devotes much of his time to daydreaming and staring out the window at the high rise buildings. English changes to Math and to something else. Each class change Jason walks the corridors, finds the right door and enters. Three or four times a day during class change, Jason slips outside to the school steps for a smoke. He enjoys watching the cars zoom by on the front street. As the day progresses the halls and classrooms get more dishevelled. Cigarette butts are strewn near the entrance, candy wrappers are discarded on the floors and desks are scattered all over. It is a dismal atmosphere.

At 3:20 when the school bell rings Jason assembles with the masses as they push and shove their way out the doors to freedom. A crowd of boys are heading downtown in an old car so Jason goes along. They race up and down the main street for awhile then go to a drive-in restaurant for french fries and cokes. At 5:45 Jason is dropped off at his home. He rushes in the house and turns on the television. For forty-five minutes his eyes are fixed on a colourful array of quiz contests. At 6:30 Mrs. Slick announces that dinner is ready so Jason hurries to the kitchen, piles high a plate of food and returns to his place in front of the television.

The evening is spent talking on the telephone and then going to a nearby cafe to join his friends. Listening to a juke box, boistrous

conversation and drinking coca cola are the evening activities. Around 10 o'clock Jason returns home and resumes his seat by the television. He picks up his English book and lets his thoughts vascilate between Shakespeare and a police drama. By late movie time he has given up on English and becomes completely engrossed in an old duster. At 1:20 a.m. Jason retires.

Tuesday is like any other day for Fred Farmer. He is a fifteen year old youth residing on a farm in North-Central Alberta. This day was Tuesday, March 26, 1974. Fred got up at 6:00 a.m., splashed water on his face, dressed and headed for the barn. After feeding the cows, pitching hay for the horses and cleaning up the stalls, Fred sauntered to the house and took his place at the kitchen table. Mrs. Farmer served a big breakfast which Fred and his father ate at a leisurely pace. Fred left the table, put on his jacket, picked up his lunch kit and departed for school.

The walk to the school bus stop was almost a mile. Fred allowed himself lots of time to walk the distance so he could stop and enjoy the serenity of the surroundings. When he got to the bus stop he had to sit by the roadside awhile and then the old, orange bus drove up and opened its doors for Fred.

Jim was in the usual seat and Fred took his place beside his friend. The ride to school took almost an hour so Jim and Fred passed the time discussing the school baseball team. The bus arrived at 8:45 and everyone filed into the school.

Fred's Grade ten class had twenty-three students in it. His classroom was neat and clean, the desks were in rows and every seat was filled. The day began with opening exercises followed by an English

lesson. Math, French, Social Studies and Science were the other subjects taught on Tuesdays. At lunchtime Fred and Jim ate in the lunchroom and then joined some other fellows in the gym where they threw a basketball around for awhile.

At 3 o'clock the school buses reloaded and the ride home began. Fred and Jim exchanged descriptions and opinions of their day in school and then they sat in silence. Fred waved as he left the bus and he jogged along the path to home. By 4:30 he was out in the field fixing a fence. At 5:30 his mother rang a bell and Fred walked to the house for supper. A hearty meal followed.

The evening was spent reading an English book and doing Math homework. By 10 o'clock Fred was tired and ready to retire.

Jason and Fred are the same age, in the same grade and both are males living in Alberta. Assumptions may be drawn about their physical and biological commonalities as well. However, it is obvious that the life style of the boys is different. Fred is a rural farm boy living close to nature with a limited number of people surrounding him. Jason is an urban teenager living in the inner city core among scores of people, mostly strangers, and daily he walks busy streets and crowded hallways. There are numerous differences in the environments of these two boys and what effect does this have? What of their personality make-up; which boy is the better adjusted? Which boy is more stable? Who is the more anxious?

This last question concerning anxiety is the topic to which this study will address itself. Educational psychologists have begun to examine those factors which affect learning. Pulvino and Hansen (1972) focused their investigation to suggest that dissonance between an

individual's needs and his perceptions of the environment is related to anxiety, alienation and discrepant Grade Point Average. Although the study considered a single population, findings suggest that an individual's perceptions of his environment is an important consideration in anxiety arousal. To relate this study to the present investigation, there are indications that environmental conditions do affect anxiety levels.

This study will devote itself to considering the differences in the level of anxiety among rural and urban teenagers. Hypotheses will be made concerning significant variables such as birth-order and sex differences.

The term anxiety is often poorly defined in that a very narrow description is offered or one so general as to encompass any unpleasant effect. The learning theory approach states anxiety as a learned response to a configuration of stimuli (Mussen, Conger and Kagen, 1963). Fromm (1941) believes that insecurity, hostility and rebelliousness are related to anxiety. Cattell and Scheier (1961) show that "anxiety is a single factor as a state, closely corresponding to the single factor found as a trait" (page 182). They even go so far as to conclude that anxiety is a part of, but not all of, neurosis. Wolpe (1958) defines anxiety as "...the autonomic response pattern or patterns that are characteristically part of the organism's response to noxious stimulation (page 34).

Another popular view of anxiety is described in terms of a biological urge to avoid danger and unpleasant emotions (White, 1972). The psychoanalytic view also persists as a descriptive and explanatory concept of anxiety (Baldwin, 1967). Whatever definition or approach

one chooses, anxiety is usually seen as an unpleasant state and worthy of closer examination.

Our era has been called the "age of anxiety" (Hulbeck, 1970) and anxiety manifestations are certainly widespread and Protean. In clinical practice or research, whether the diagnosis is for psychotherapeutic purposes, or for problems of internal medicine caused by life stress, it is increasingly necessary to have standard and dependable estimates of the role of anxiety. The IPAT Anxiety Scale was developed from extensive research and practice as a means of getting clinical anxiety information rapidly, objectively, and in a standard manner (Cattell and Scheier, 1963).

In the present study anxiety is regarded as a single factor which is affected by the environment. Emerging from this discussion is the underlying hypothesis that high school students from rural and urban settings will demonstrate differing levels of anxiety.

CHAPTER II

REVIEW OF RELATED LITERATURE

It appears necessary to review various psychological theories relating to anxiety. Accordingly, four accepted positions will be examined. Thereafter, the actual research that has been conducted using anxiety as a measure will be overviewed. Finally, hypotheses arising out of the literature will be offered.

> "I would say that learning to know anxiety is an adventure which every man has to affront if he would not go to perdition either by not having known anxiety or by sinking under it. He therefore who has learned rightly to be anxious has learned the most important thing." (Kierkegaard)

The manner in which each person copes with his anxiety is unique to each individual. However, the extent to which each person suffers from anxiety is measurable and many implications may be made from this measure. Before one can attach a number or produce a clinical assessment relating to an individual's anxiety level, a basic understanding of the dimensions of the term is necessary.

What is anxiety? The answer to this question is not a simple description of the phenomenon as there are many theories on the subject. Anxiety may be viewed from several different viewpoints: philosophical, psychological, physiological or a cultural view may be considered. However, some common characteristics can be found, and common distinctions made.

Some contend that anxiety is unspecific, vague and objectless; that it is characterized by feelings of uncertainty and helplessness since the threat to which it is a response cannot be objectified (May, 1950). Others describe it as an "unpleasant emotional state" (Rickles,

1963, p. 4).

According to May anxiety may be normal or neurotic. Normal anxiety, although a reaction to threats, is proportionate to the threat. It "does not involve repression or intrapsychic conflict, and can be met by constructive development and increasing employment of the person's own courage and powers rather than retrenchment into neurotic defense mechanisms" (May, 1950, p. 197). In neurotic anxiety the reaction is disproportionate to the threat. Repression and other forms of intrapsychic conflict are involved and it "is managed by various forms of retrenchments of activity and awareness such as inhibitions, the development of symptoms and the varied neurotic defense mechanisms" (May, 1950, p. 197).

Some aspects of anxiety having been considered, let us now briefly view this phenomenom as described by theorists from widely different schools of thought.

RELATED THEORETICAL FORMULATIONS

There are many theories on the topic of anxiety. Although the causal factors which create the anxiety condition differ, the theories seem to concur in presenting anxiety as an unpleasant state. The psychoanalytic, existential, physiological and social learning approaches to anxiety are considered in detail hereafter.

The Psychoanalytic Approach to Anxiety

Freud was the first to attempt "to explicate the meaning of anxiety within the context of psychological theory" (Spielberger, 1966, p. 9). Although much of his theory is being questioned today, he did pioneer the study of anxiety from a scientific viewpoint. Freud considered anxiety as the basis for understanding emotional and psychological

disorders, and as the central problem in neuroses.

Initially Freud based his theory of anxiety on clinical observations where he attempted to interrelate neurotic anxiety and objective anxiety. In his book, The Meaning of Anxiety, May summarized Freud's first theory as follows:

> "The individual experiences libidinal impulses which he interprets as dangerous, the libidinal impulses are repressed, they become automatically converted into anxiety, and they find their expression as free-floating anxiety or as symptoms which are anxiety equivalents" (May, 1950, p. 116).

Freud's second theory on anxiety involves the ego as perceiving the threat. He reversed his earlier view and now says it is not repression that causes anxiety (repressed libidinal energy becoming converted to anxiety) but anxiety which causes repression. He believed that anxiety occurred as a response to perceived danger and that the symptoms are created in order to rescue the ego from the situation of danger (Freud, 1936).

Freud also postulated that the actual origin of anxiety is in the birth trauma and in the fear of castration. The fear of being separated from the mother is the essence of the birth trauma and the loss of something of value describes the castration fear (Freud, 1936).

Much has been written and much more could be said on Freud's theory of anxiety but it suffices at this time to say, he paved the way for many later investigations into the nature and role of anxiety.

It could be contended that the fear of being separated from the mother is more predominant in urban children than rural children. If this contention is true then urban children will exhibit greater anxiety than will rural children.

The Existential Approach to Anxiety

May (1967) describes anxiety as arising out of a blurring of subjective and objective; or the loss of one's self in relation to the objective world. May's thesis is based on a value orientation: anxiety occurs because of a threat to the values a person identifies with his existence as a self. An individual's "capacity for anxiety is not learned, but the quantities and forms of anxiety in a given individual are learned" (May, 1950, p. 208). In May's terms, neurotic anxiety occurs when the individual attempts to satisfy needs (values) which were appropriate to earlier stages, and develops because the person has not dealt with normal anxiety at the actual times of crisis when his integral values were threatened. Normal anxiety is an obvious outcome of individuation which occurs at every development stage.

The Protestant Ethic is still a major part of the values to which the rural resident adheres (Wooster, 1972). The urban resident has altered his values to new and progressive views. Thus, it would seem there would be greater threats to the urban citizen's values. Further to this it would also appear that the urban subject would exhibit greater anxiety than the rural subject.

Another existential philosopher and theologian, Tillich, defines anxiety as, "the state in which a being is aware of its possible non-being" (Tillich, 1968, p. 35). Every individual is ultimately aware of the finite nature of man. Basic anxiety is inseparably linked with man's latent awareness of having to die.

The rapidity of living which urban dwellers experience seems concurrent with the ever awareness of the possible accident or tragedy which threatens each of us. This awareness is less confronted in the

rural areas because the sparser population presents fewer disasters to constantly remind the rural dweller of possible tragedy. It would therefore seem likely that the urban resident would exhibit greater anxiety than the rural resident.

The Physiological Approach to Anxiety

One of the more familiar, early theories of the relationship between emotions and physiological responses was that of James (1884; 1890). His was a viscerogenic theory. James' theory implied that emotional experience is crucially dependent upon the sensory feedback from emotional actions, or emotional arousal. Therefore, there should exist distinctive visceral-somatic reactions (such as, changes in heart rate, respiration, muscle tension) corresponding to each different reported emotional experience (Bindra, 1969).

Many physiological responses associated with anxiety occur in the autonomic nervous system. Increased heart rate and blood pressure, pupil dilation, dryness of mouth, palmar sweating, shivering and muscle tremors, stomach distress, diarrhea, and frequent urination have been recorded in anxious subjects.

Hebb (1966) describes anxiety in terms of fear. He says that when fear is chronic, because the threat cannot be escaped, or when there is no external threat and the fear is due to some disorder within the nervous system itself, it is called anxiety. The relationship of physiological arousal and anxiety may be clarified in the context of activation theory. The inverted U curve of arousal (Yerkes-Dodson law, 1908) indicates that the capacity of sensory stimulation to guide behavior is poor when arousal is very low or very high.

Today's cities are filled with stimulating activities. For the

contemporary urban youth there are a multitude of activities in which to participate. Decisions and choices must constantly be made. The arousal level of the urban youth can be greatly heightened as he struggles to make the best decisions and choices. Also, the fear of wrong choices is ever present. Contrary to this way of life, the routine of the rural youth seems less harassing. He is not subjected to the bombardment of stimuli which the city offers. The rural youth is usually kept busy with family matters, school and work responsibilities. Thus, it would seem possible that one would find less anxiety laden subjects in a rural environment than in the urban centers.

The Social Learning Approach to Anxiety

Wolpe defines anxiety as "the autonomic response pattern or patterns that are characteristically part of the organism's response to noxious stimulation" (Wolpe, 1958, p. 34). Much of Wolpe's (1958; 1964) formulations on anxiety and neurotic behavior are based on Pavolv's descriptions of experimental neurosis in animals. However, Wolpe and Pavlov differ in that Wolpe states neurotic behavior results from learning while Pavlov sees it as a result of neurological damage. Like Pavlov, Wolpe concludes that all neuroses are outcomes of the exposure of the organism to either ambivalent or noxious stimuli; and the development of neuroses depends upon the induction of highly intense anxiety.

Like Hull (1943) Wolpe postulates that noxious stimulation produces a tissue change which causes the individual to carry out various avoidance behaviors. Wolpe places by far the greatest weight upon those conditions which were originally neutral with regard to anxiety elicitation. Through association with unconditioned elicitors of anxiety the neutral conditions attain the power to evoke an anxiety response. For

example, if intense anxiety is evoked by a given situation, any event occurring at the same time may also become an effective elicitor of anxiety. (This is a simple learning a la continguity principle of Guthrie).

Wolpe considers that circumstances which promote conflict are another potent source of anxiety response. Whatever the particular event that elicits anxiety, the individual is driven to avoid these events. In neurotic disorders, behaviors are learned to reduce anxiety that are unadaptive, and as a result we have a situation wherein the cure is worse than the disease.

Wolpe does not distinguish between "anxiety" and "fear". For him the two terms can be used synonymously. This is quite different from both Freud and Sullivan who carefully outline the differences between the two affective conditions. Wolpe claims that there are no physiological differences between the reactions to objective or subjective stimuli. The anxiety response always depends on antecedent conditions, and it is evoked by stimuli previously associated with threatening stimuli. Pervasive ("free-floating") anxiety is evoked by diffuse aspects of the environment. Wolpe also says the actual anxiety-producing stimuli need not be present to evoke an anxiety reaction: the subject may only need to think of them to evoke the reaction.

In order to cope with this unpleasant effect, a person learns particular habits or defenses which he utilizes to fend off the anxiety. These habits and defenses become a relatively stable part of the individual's repetoire of behaviors.

Although Wolpe tends to emphasize external rather than internal factors, his approach to anxiety is not really that far removed from the

theoretical perspectives of Freud. If we interpret Freud's second theory of anxiety in Pavlovian terms, a fear becomes conditioned to an impulse because the impulse previously led to behavior which was punished. When this impulse begins to re-emerge into consciousness (with the accompanying unwanted behavior patterns) the person experiences the anxiety without necessarily pinpointing the instigating impulse. He constructs elaborate defense mechanisms (habits) to inhibit this undesirable impulse.

Wolpe describes conflict as a source of anxiety. It would seem likely that adolescents who live in urban centers would suffer more conflict than adolescents from rural areas. The masses of people within a city provide wider dispersion of thought, values and ideals which can create confusion for the adolescent. Thus, anxiety would be heightened for the urban adolescent and he would exhibit greater anxiety than the rural adolescent.

Whatever theory or approach to anxiety one examines, there seems to be one similarity which prevails: anxiety is an unpleasant state. It is a physical and emotional response to an expectancy that harm will come to oneself. The sources of possible harm are difficult to identify and quantify, and the experience of anxiety is so subjective that it often gives the impression that the state is also totally illogical and irrational. Mowrer helped to clarify the issue when he stated:

> "There is a common tendency in our day, both on the part of the professional psychologists and laymen, to look upon anxiety as a negative, destructive, "abnormal" experience, one which must be fought and if possible annihilated. ...Anxiety,...is not the cause of personal disorganization; rather it is the outcome or expression of such a state. The element of disorganization enters with the act of dissociation or repression, and anxiety represents not only an attempted return of the repressed but also a striving on the part of the total personality

> toward a re-establishment of unity, harmony, oneness, "health" (in May, 1950, p. 109).

RELATED RESEARCH

A review of the literature indicates that research studies in which attempts are made to assess anxiety are plentiful. Although it is only one component of the total personality, anxiety seems to be a good indicator of an individual's level of functioning. Research on the topic of anxiety as it relates to adolescents in urban and rural settings, male and female differences, and ordinal position in the family is presented hereafter.

Considering Freud's model that anxiety occurs as a response to perceived danger, what situations in life could lead to high anxiety? With reference to Jason Slick one might hypothesize his existence as a threatening experience. Daily he encounters masses of strangers, large buildings, busy streets and general rapidity in life. Wrightsman (1960) conducted a study involving changes in levels of anxiety. He concludes that people evaluate their level of anxiety through the process of social comparison. For the urban boy social comparison could be a confusing issue. The dangers Jason perceives may be highly threatening to him but his environment is such, that the opportunity to discuss and compare his feelings with others may not present itself. Life happens so quickly in the cities that often the secret fears, hopes and dreams of children are passed by for lack of time to consider them.

Freud also postulated that the origin of anxiety was in the birth trauma or fear of being separated from the mother. This fear of separation may be related to the initial total dependence an infant has on his mother. Sears (1950) found that if the mother's "rigidity of scheduling of feedings and her method of handling the weaning process

are such as to decrease the child's ease of gaining satisfactions, he would be expected to suffer, over the long term, an increase in anxiety" (p. 401). Further it was suggested that through stimulus generalization this anxiety would reoccur in any social situation involving unsatisfied needs. Sears findings also indicated that first-born children are more likely to be victims of this rigidity in mother's behavior. Therefore, the hypothesis is suggested that first-born subjects will be more prone to anxiety than later-born subjects.

May describes anxiety in terms of a threat to the values a person identifies with his existence as a self. Wooster (1972) investigated the degree of adherence to the Protestant Ethic in a rural area. He found high adherence to the Protestant Ethic is related to the rural-urban continuum. Those persons living in a rural setting can maintain the traditional value systems. Threats to their values are minimal. On the other hand the urban dweller has discarded the old values and is trying out new ideas. The threats to his progressive thinking are many, his ideals have not had centuries to prove themselves. It would therefore appear that anxiety, as May describes it would be more predominant among urban people.

Wolpe (1958) claims that pervasive anxiety is evoked by diffuse aspects of the environment. Linn (1973) conducted a study to assess childhood reminiscenses as predominantly happy or unhappy. One hundred male subjects, aged 65 - 92, were interviewed and encouraged to reminisce. She found that subjects with a happy childhood are reared in a rural setting. Havighurst (1972) found that pleasant reminiscence are associated with good adjustment and morale among aging individuals. Tissue and Wells (1972) state the present life style relates to earlier life patterns

among the elderly. It would seem that persons who are well adjusted and have good morale in old age likely were thus in earlier times and it is probable they came from a rural setting. The rural environment presents much less diffusion than does the urban society. Anxiety would probably be heightened within an inner-city core. Persons from an urban environment would likely exhibit greater anxiety than persons from a rural environment.

Hulbeck (1970) expresses concern with the social definition of anxiety. He claims the age of reason and the following cultural and sociological developments have brought about the age of anxiety. "The age of enlightenment and the age of progress ended in the age of anxiety" (p. 5). He describes the problem of anxiety as determinable by the sociologist. It is an environmental problem. "Man's environment gives him signs for his development but no real direction" (p. 10). He further states that "man gets used to things which are inevitable, but he will never get used to the fact that his life can change completely in a short time and make something out of him that he never expected" (p. 11). Basic anxiety is due to this unpredictability in life.

The rural resident is seldom subjected to sudden, unexpected change. For him progress has been a gradual occurrence. Modern machinery has somewhat altered the old routines but still much of a farmer's existence is predictable. Weather conditions and economic pressures can totally alter his life style but such happenings are not unexpected, they have always been a hazard for the rural farmer. On the other hand, the urban dweller may understand little of his environment. He is constantly hearing about or viewing accidents, fires, crimes and other tragedies. Most people take precautions to prevent being the victim of an unexpected

tragedy, but to a city resident the awareness of its possibility is always there. This fear of the unexpected has much more potential in urban areas than in rural areas. Thus, it could be hypothesized that urban subjects would exhibit greater anxiety than would rural subjects.

Hulbeck's (1970) view of anxiety seems supportive of Tillich's idea that the finite nature of man is the source of basic anxiety. Fear of the unpredictable future and the uncertainty of when death will occur are probable causes of anxiety.

Urban centers abound in traffic deaths, fires, accidents and numerous other tragedies. Daily newspapers, television and radio inform the public of these sad happenings. Sirens blaring through the busy streets are a constant reminder of the cautions one must take to survive the milieu. Rural residents enjoy a more serene existence. The news of tragedy may be heard but the constant reminders are not present. Sirens are a rare sound on a country road. Considering what the urban dweller must cope with in his environment, it would not be surprising to discover his anxiety level is greater than that of the rural dweller.

Engelsmann (1972) compared rural, outer city and inner city populations on a symptom check list. He found that a "psychosomatic cluster" was often mentioned by inner and outer city people but rarely by rural subjects. He hypothesized that the rural dwellers are able to blame other people for the problems which they feel besetting them, and hence have no need to look for a source in themselves. Murphy (1971) offers evidence that people who blame other people for their dissatisfactions will report fewer symptoms than people who have the dissatisfactions but have difficulty blaming others. "Dissatisfactions are not always conscious and are not caused so much by objective difficulties as

by the gap between aspirations and attainments" (Engelsmann, 1972, p. 155). Despite their greater material attainments, city residents may feel the gap between their desires and these attainments just as severely as the rural residents who, though receiving less also expected less. It would therefore appear that the rural resident exhibits fewer symptomatic problems and expects less in life. Anxiety being a component of personality, it would seem that persons reporting less symptoms might also report less anxiety. Also persons who expect less have less to fear of the unexpected. Therefore, the hypothesis is here suggested that the rural subject will exhibit less anxiety than will urban counterparts.

Sex and Anxiety

Sex differences in levels of anxiety are a concern of the present study and research consistently indicates that females exhibit greater anxiety than do males (Bendig, 1960; Burnett, 1963; Thompson, 1963). Engelsmann (1972) stated that most community studies employing psychophysiological symptom check-lists have found women to score higher than men and that in all groups the excess female score derived most from those items reflecting anxiety. Mandler and Corven (1958) while testing the reliability and validity of the Test Anxiety Questionnaire found significant differences in the scores of males and females. On the college form female subjects at Boston University scored significantly higher than their male counterparts. Similarly, on the high school form the female students scored significantly higher than the male students. Mootz (1972) investigated the anxiety level of male and female graduate students living in University housing at University of North Dakota. Using the Heineman Anxiety Scale he found the women scored significantly higher than did the men.

Taylor (1953) wrote an article about the Manifest Anxiety Scale. She described the construction of the test and outlined the normative data which she had accumulated in connection with it. Pertinent to the present study are her findings related to sex differences. Taylor found the mean scores of females to be higher than the mean scores of males on the Manifest Anxiety Scale. These findings, as well as those cited previously, tend to be consistent in supporting the hypothesis that females exhibit greater anxiety than do males.

Ordinal Position and Anxiety

Birth order is used as a dependent variable in the present study. Research on the effect of birth order presents conflicting views. Schacter (1959) suggested there is evidence that in earlier-born siblings anxiety-provoking situations produce considerably more anxiety and fear. Schacter (1964) stated: "Subjects who were first-born or only children appeared to be far more dependent than subjects who were later-born", (p. 453) and that "dependent behavior will most strongly manifested in conditions of disturbance and anxiety..." (Schacter, 1959, p. 89). First-borns, says Schacter, will experience more interpersonal difficulties than later borns. Staples and Walter (1961) concur with these latter findings.

Contrary to the above, Grosz (1964) doubts Schacter's observations. His findings show no significant differences in the scores of first, second and third born siblings on anxiety measures and affiliative tendencies. Koch (1956) writes: "We were impressed with the fact that few of our dependent variables were related in any simple way to ordinal position...the sweeping generalizations found in the literature about the effect of birth-order need some tempering". Toman (1961) expresses

similar cautions.

Roberts (1971) surveyed boys aged 14 - 15 and coming from different social class backgrounds. He found first-born sons from lower, working class homes are more anxious than their later-born siblings. Altus (1966) writes that ordinal position at birth has been shown to be related to significant social parameters.

Much more research must be undertaken before the effect of birth order is truly understood. Kammeyer (1967-68) writes: "Birth order (or ordinal position) in the nuclear family when it is used as a research variable, is only an indicator of some other phenomenom" (p. 73). In this present study there will be an investigation into possible differences in levels of anxiety of first-born and later-born subjects. The hypothesis will be in the direction of probable outcome which seems to be that first-born subjects will exhibit greater anxiety than later-born subjects.

HYPOTHESES

The previous consideration of theory and research leads to the following hypotheses:

HYPOTHESIS I

Urban subjects will exhibit greater anxiety than rural subjects.

HYPOTHESIS II

Female subjects will exhibit greater anxiety than male subjects.

HYPOTHESIS III

First-born subjects will exhibit greater anxiety than later-born subjects.

CHAPTER III

DESIGN AND PROCEDURE

The Sample

The subjects were selected from three High Schools and all were Grade ten students. One hundred students from Victoria Composite High School comprised the urban sample. Seventy-four students from Pigeon Lake Regional High School and twenty-six students from Grassland School comprised the rural sample. There was a total of ninety-one males and one hundred and nine females. Seventy-two subjects reported they were first-born in their family and one hundred and twenty-eight reported they were later-born.

The urban school is located in downtown Edmonton and has a total student population of two thousand, two hundred for Grades ten to twelve. The rural schools are located in Falun and Grassland, Alberta. Both the rural schools are centralized and service large geographic areas where farming is the dominant industry. The Pigeon Lake Regional High School has grades nine to twelve with a total student body of two hundred and eighty-five. The Grassland School has two hundred and sixty-nine students in Grades one to eleven.

All subjects were asked to respond to forty items on the IPAT Anxiety Scale plus five additional questions relating to sex and birth-order. The time required to complete the entire test was approximately twenty minutes per subject.

The Instrument

The IPAT Anxiety Scale is a brief non stressful questionnaire for measuring anxiety. It provides the examiner with clinical anxiety

information in a rapid, objective and standard manner. The IPAT is easily administered either individually or to a large group. It consists of forty questions which require a response of "true", "false" or "in between". The subject is requested to answer in a manner which best describes himself.

The forty items on the IPAT Scale measure total anxiety and are also distributed among five anxiety components (Table I). Further breakdown of the forty questions divides the items into a) the overt score which may be called conscious anxiety and b) the covert score which may be called hidden anxiety. The distribution or item composition of the IPAT Scale is summarized in Table I.

TABLE I

ITEM COMPOSITION OF THE IPAT ANXIETY SCALE

ANXIETY COMPONENTS	WEIGHT (Number of Items)	IDENTIFICATION OF ITEMS BY NUMBER ON TEST FORM	
Q3 Defective Integration, Lack of Self-Sentiment	8	1, 2, 3, 4	21,22,23,24
C Ego Weakness, Lack of Ego Strength	6	5, 6, 7	25,26,27
L Suspiciousness or Paranoid Insecurity	4	8, 9	28,29
O Guilt Proneness	12	10,11,12 13,14,15	30,31,32 33,34,35
Q4 Frustrative Tension or Id Pressure	10	16,17,18 19,20	36,37,38 39,40
		COVERT (Hidden)	OVERT (Symptomatic)

Reliability coefficients for the total anxiety score range from +.80 to +.93 depending on the type of reliability and the nature of the group tested. The reliability coefficients for the overt and covert part scores were achieved by a test-retest process resulting in +.89 for the covert scale and +.82 for the overt scale. Reliability drops for the shorter part scores, that is the five personality components. The reliability coefficients are:

Q3	C	L	O	Q4
Unintegrated Self Sentiment	Ego Weakness	Suspiciousness or Paranoid Insecurity	Guilt Proneness	Tension
+.42	+.43	+.26	+.59	+.60

Although these coefficients seem low, the brevity of the number of items may account for this. Cross studies have been made using these component items with the IPAT 16 PF (Forms A and B) and reliability coefficients then range from +.76 to +.93 (Cattell and Scheier, 1963). Since the present study is an experimental study and not a clinical diagnosis, the level of reliability appears adequate.

Validation of the IPAT Anxiety Scale is extensive and presents a number of variations in the methods. Two types of validity are reported: (1) construct or internal validity and (2) concrete or external validity. Construct validity is estimated at +.85 to +.90 for the total scale. Several methods of estimation were used to attain these figures. The concrete validity is difficult to express numerically. In two separate studies it was demonstrated that the "concensus of psychiatrists' diagnosis as to anxiety level correlates higher with scores on this anxiety test factor than with any other known personality factor" (Cattell and Scheier, 1958, 1961). The correlation between clinical concensus and

and the IPAT Anxiety Scale scores ranges from +.30 to +.40.

It is contended that the part scores of the IPAT Anxiety Scale are not intended to stand finally by themselves in interpretation. They are too brief and unreliable for this. However, they may be used as suggestive leads to analyze the various sources and expression of any given anxiety level (Cattell and Scheier, 1963). Following is a brief description of each of the five components used in the IPAT Anxiety Scale.

1. Lack of Self Sentiment Development (Q3)

The Q3 component may be considered a measure of the extent to which anxiety has become bound in socially-approved character structures and habits. At the healthy, non anxious (low score) end of this component an individual tends to integrate his behavior through socially-approved standards. The high scorer is likely unclear about his self concept and indecisive about conforming to social demands. The high scorer is in a state of conflict and consequently demonstrates symptoms of anxiety.

2. Ego Weakness (C)

The C component represents the concept of ego strength or the capacity to control and express frustrative tensions in a suitably, realistic way. The high scorer on the C component fails to develop inner controls and is often frustrated by his inability to cope with events in a realistic manner.

3. Suspiciousness, Paranoid-Type Insecurity (L)

These paranoid-type behaviors cause social difficulties such as isolation or anxiety. Sometimes anxiety occurs first and the L components develop as a defense against it.

4. Guilt Proneness (O)

The O component involves feelings of unworthiness, depression and guilt. An individual obtaining high scores on the O scale might very closely resemble the clinical pattern of a depressed neurotic.

5. Frustration Tension, Id Pressure (Q4)

The Q4 component is a central component of anxiety in that it represents the degree to which anxiety is generated by excited drives and frustrated needs of all kinds. The high scorer on the Q4 component generally tends to be characterized by proneness to tension, irritability, emotionality and jitteriness (Cattell and Scheier, 1963).

Among the part scores mention must be made of the overt and covert subscales. The analysis of these scores indicates the degree to which a subject is conscious or not conscious of his anxiety, or of his wish to consciously emphasize it. There are twenty items on each of these subscales and although not entirely obscure in their diagnostic meaning, to the untrained lay examinee, the implications are not obvious.

In general, the IPAT Anxiety Scale is easy to administer and scoring is quick and simple. It is important to note that the IPAT is not intended to be used as a single diagnostic instrument. Instead, its value is demonstrated in research studies in that a high score on the test is a good measure of probable anxiety level.

Procedure

A total of eight classrooms were visited in order to have two hundred Grade ten students complete the IPAT Anxiety Scale. The subjects were asked to answer the questions honestly and not to ponder the items too long since first impressions are usually accurate. Accompanying each IPAT Anxiety Scale questionnaire was a sheet of paper on which five items

were presented. See Appendix.

Analysis

A three-way analysis of variance was used to determine the relationship between the scores of the rural and urban subjects, the male and female subjects and the first-born and later-born subjects.

CHAPTER IV

FINDINGS AND CONCLUSIONS

In an effort to determine if there are any real differences in the anxiety level of urban and rural subjects, male and female subjects, or first-born and later-born subjects, a three-way analysis of variance on the subject's test scores was carried out. For purposes of clarity and ease of reader interpretation each hypothesis is restated followed by the pertinent statistics and appropriate conclusions.

HYPOTHESIS I

Urban subjects will exhibit greater anxiety than rural subjects.

Findings

Scores for the IPAT Anxiety Scale were tabulated for each subject. Table II depicts the mean scores for the subjects.

TABLE II

MEAN SCORES FOR URBAN AND RURAL SUBJECTS ON IPAT ANXIETY SCALE

Group	Five Factor Components of Anxiety							
	Q3	C	L	O	Q4	Covert	Overt	Total
Urban	7.020	5.280	3.750	10.290	11.050	18.040	19.250	37.290
Rural	7.040	4.530	3.430	10.020	10.020	18.050	16.990	35.040

It is visually evident that urban subjects scored higher on most of the scales. At the .05 level of significance the urban subjects scored significantly higher on the C (Ego Weakness) scale, Q4 (Tension, Id Pressure) scale and on the overt anxiety scale. Table IIA represents the pertinent three-way analysis of variance results.

TABLE IIA

SUMMARY, ANALYSIS OF VARIANCE OF SCORES OF
URBAN AND RURAL SUBJECTS ON ALL IPAT ANXIETY SCALES

	S.S.	D.F.	M.S.	F.	P.	Decision
Q3	0.16	1	0.16	0.17	0.68	N.S.
C	0.26	1	0.26	0.44	0.04	SIG.
L	0.70	1	0.70	0.17	0.20	N.S.
O	0.95	1	0.95	0.62	0.43	N.S.
Q4	0.83	1	0.83	0.48	0.03	SIG.
Covert	0.81	1	0.81	0.25	0.62	N.S.
Overt	0.32	1	0.32	0.59	0.02	SIG.
Total	0.43	1	0.43	0.31	0.08	N.S.

There were no interaction effects between dependent variables.

Conclusion

In general, Table II indicates that rural students scored lower on most of the factor components of anxiety. Confirmation of hypothesis I was obtained on the C and Q4 components as well as the overt scale. These scores were significantly different at the .05 level of significance.

In keeping with the definition of the IPAT scales, certain conclusions may be drawn. Rural students tend to have the capacity to control or express tensions in a more realistic manner than do urban students. Urban students also show a proneness to emotionality, tension, irritability and jitteriness. Finally, rural students appear to be more aware of their tensions at a conscious level.

HYPOTHESIS II

Female subjects will exhibit greater anxiety than male subjects.

Findings

Scores for the IPAT Anxiety Scale were tabulated for each subject. Table III depicts the mean scores for the subjects.

TABLE III

MEAN SCORES FOR MALE AND FEMALE SUBJECTS ON THE IPAT ANXIETY SCALE

Group	Five Factor Components of Anxiety							
	Q3	C	L	O	Q4	Covert	Overt	Total
Male	6.901	4.846	3.758	9.044	9.901	17.967	16.484	34.451
Female	7.138	4.954	3.450	11.083	11.064	18.110	19.486	37.596

It is visually evident that female subjects scored higher in most of the scales. At the .05 level of significance, the female subjects scored significantly higher on the O (Guilt Proneness) scale,

TABLE IIIA

SUMMARY, ANALYSIS OF VARIANCE OF SCORES OF
MALE AND FEMALE SUBJECTS ON ALL IPAT ANXIETY SCALES

	S.S.	D.F.	M.S.	F.	P.	Decision
Q3	0.43	1	0.43	0.47	0.49	N.S.
C	0.52	1	0.52	0.87	0.98	N.S.
L	0.28	1	0.28	0.66	0.42	N.S.
O	0.20	1	0.20	0.13	0.00	SIG.
Q4	0.10	1	0.10	0.57	0.02	SIG.
Covert	0.72	1	0.72	0.22	0.64	N.S.
Overt	0.45	1	0.45	0.82	0.00	SIG.
Total	0.57	1	0.57	0.41	0.04	SIG.

There were no interaction effects between dependent variables.

Q4 (Tension, Id Pressure, Frustration Level) scale, overt anxiety scale, and in the total score. Total IIIA represents the pertinent three-way analysis of variance results.

Conclusion

Confirmation of hypothesis II was obtained on the O and Q4 scales indicating that the females sampled exhibited greater guilt proneness and tendancy toward emotionality and irritability than did the males. These results are consistent with numerous other studies (Burnett, 1963; Taylor, 1966 and Wheeler, 1965). More specifically, Taft (1968) observed a similar trend in that females scored higher in emotional sensitivity as determined by the Willoughby Personality Schedule. Like the others, "exactly why this is so remains to be investigated" (Cattell and Scheier, 1963, p. 22).

In a further study, Meredith (1966) using intra-cultural comparisons obtained similar results. He hypothetically related the sexual differences in anxiety to the demands and expectations placed by the cultures. Hypothetically, perhaps investigation into the differences in demands and expectations of females from two accessible populations, such as urban and rural, might shed added light on this issue.

HYPOTHESIS III

First-born subjects will exhibit greater anxiety than later-born subjects.

Findings

Scores for the IPAT Anxiety Scale were tabulated for each subject. Table IV depicts the mean scores for the subjects.

TABLE IV

MEAN SCORES FOR FIRST-BORN AND LATER-BORN SUBJECTS ON THE IPAT ANXIETY SCALE

Group	Five Factor Components of Anxiety							
	Q3	C	L	O	Q4	Covert	Overt	Total
First-Born	7.014	5.056	3.606	10.521	11.099	18.014	19.282	37.296
Later-Born	7.039	4.822	3.581	9.953	10.225	18.062	17.481	35.543

At the .05 level of significance, there is no significant difference in the scores of first-born and later-born subjects. Table IVA represents the pertinent three-way analysis of variance results.

Conclusion

Confirmation of hypothesis III was not obtained. There is no significant difference in the anxiety exhibited by first-born subjects and later-born subjects. Although the level of significance is lacking the trend toward the hypothesis is evident in four of the five components as well as the overt scale and total score. Further studies using a larger sample might support the hypothesis.

TABLE IVA

SUMMARY, ANALYSIS OF VARIANCE OF SCORES OF
FIRST-BORN AND LATER-BORN SUBJECTS ON ALL IPAT ANXIETY SCALES

	S.S.	D.F.	M.S.	F.	P.	Decision
Q3	0.40	1	0.40	0.44	0.83	N.S.
C	0.21	1	0.21	0.36	0.55	N.S.
L	0.27	1	0.27	0.64	0.94	N.S.
O	0.16	1	0.16	0.10	0.32	N.S.
Q4	0.24	1	0.24	0.14	0.24	N.S.
Covert	0.77	1	0.77	0.24	0.88	N.S.
Overt	0.12	1	0.12	0.22	0.14	N.S.
Total	0.10	1	0.10	0.73	0.39	N.S.

There were no interaction effects between dependent variables.

CHAPTER V

DISCUSSION AND IMPLICATIONS

> "A human being does not grow up in a vacuum: His development is determined not only by the physical environment as the biologist proved, and by the family environment as Freud proved, but as the massive data collected by the cultural anthropologists showed by the larger societal and cultural institutions..." (Murray and Kluckhohn, 1956, p. 4)

Society is changing. During the past decade the advent of the space age has brought about change at a remarkably rapid rate. It is this rapid acceleration to which the professional educator must alert himself since he must be aware of the how and why of change if he is to cope adequately with its consequences.

Specifically, it is important that the educational psychologist be prepared to meet change "head-on" if he is to help a child or adolescent choose realistic educational goals and attain emotional stability in a constantly changing environment. In order to prepare himself, the educator needs to understand the variables related to life style, particularly with respect to how environmental changes affect life style.

This present study endeavoured to consider the life style of students from two different settings. The results of the investigation are supportive of the underlying hypothesis, that is, urban subjects do exhibit greater anxiety than rural subjects. The celerity of life for Jason Slick creates for him many uncertainties and unexpected occurrences. This unpredictable existence tends to increase anxiety (Hulbeck, 1970, May, 1950). Contrasted to the hustle and bustle of city life is the routine of Fred Farmer. His existence is considerably more foreseen and thus he seems to suffer less anxiety.

There are many causal factors in producing high anxiety in an individual. Some have been suggested throughout this study, but empirical data on the topic is lacking. A larger sample needs to be examined to establish more definite trends. Physiological measures of anxiety could be employed for greater validation of the results. Also, tests which measure more personality components than just anxiety might derive more specific conclusions. Additional research to discover what internal characteristics of rural subjects comes into focus which could explain the differences between urban and rural subjects would be helpful.

The findings of this study on anxiety levels as it relates to sex differences are consistent with the research. Female subjects do exhibit greater anxiety than do male subjects. Pulvino and Hansen (1972) offer one explanation for this difference as it relates to school achievement. They state: "...males get anxious when they don't achieve whereas females get anxious when they do" (p. 74). Their findings may be true but it only relates to one aspect of life, considerably more research must be undertaken to determine the actual causal factors of differences in anxiety levels between the sexes.

Concerning birth order, this study will add little to the volumes of research on the topic. Contrary to Schacter's (1959) views, no significant differences were found in first-born and later-born siblings. The findings of the present study are consistent with those of Grosz (1964). It appears that much more research on the effect of ordinal position must be done before the conflicting information is sorted out.

Implications for Further Research

The present study exemplifies the differences between the anxiety level of urban and rural populations. As previously stated, the

underlying causes of such a difference remain undetermined. The present study also leaves unanswered the reasons why males and females differ throughout both populations. What is evident, according to the findings in the present study, is that there are differences in the anxiety levels of rural and urban adolescents and differences between males and females in both the rural and urban settings. The urban adolescent exhibits greater anxiety than does the rural adolescent. Similarly, the female adolescent exhibits greater anxiety than does the male adolescent. Other studies hopefully can be structured to build on these initial evidences of differences.

BIBLIOGRAPHY

BIBLIOGRAPHY

ALTUS, W.D. Birth order and its sequel. Science, 1966, 151, 44 - 49.

BALDWIN, A.L. Theories of Child Development, New York: John Wiley and Sons, Inc., 1967.

BENDIG, A.W. Factor analyses of "anxiety" and "neuroticism" inventories. Journal of Consulting Psychology, 1960, 24, 161 - 168.

BINDRA, D. A unified interpretation of emotion and motivation. Annuls of the New York Academy of Sciences, 1969, 159, 1071 - 1083.

BRANCH, H.C.H. Aspects of Anxiety, Philadelphia: Lippencott Company, 1968.

BURNETT, A. and THOMPSON, G. Anxiety scale ratings in educable retardates. Personal communication to IPAT Test Editor, and paper read to American Association of Mental Deficiency at October, 1963, regional conference.

CATTELL, R.B. and SCHEIER, I.H. The Meaning and Measurement of Neuroticism and Anxiety, New York: The Ronald Press Co., 1961.

CATTELL, R.B. and SCHEIER, I.H. Handbook for the IPAT Anxiety Scale Questionnaire, (Champaign, Ill.: Institute for Personality and Ability Testing, 1963).

ENGELSMANN, F., MURPHY, H.B.M., PRINCE, R., LEDUC, M. and DEMERS, H. Variations in responses to a symptom check-list by age, sex, income, residence and ethnicity. Social Psychiatry, 1972, 7, 150 - 156.

FREUD, S. The Problem of Anxiety, New York: The Psychoanalytic Quarterly and W. W. Norton and Company, Inc., 1936.

FROMM, E. Escape From Freedom, New York: Rinehart and Co. Inc., 1941.

GROSZ, H.J. Birth order, anxiety and affiliative tendency: observations and comments regarding Schacter's hypothesis. Journal of Nervous and Mental Disease, 1964, 139, 588 - 590.

HAVIGHURST, R.J. and GLASSER, R. An exploration study of reminiscence. Journal of Gerontology, 1972, 27, 245 - 253.

HEBB, D.O. A Textbook of Psychology, 2nd Ed., Philadelphia: W. B. Saunders Co., 1966.

HULBECK, C.R. The irrational and the nature of basic anxiety. American Journal of Psychoanalysis, 1970, 30, 3 - 12.

HULL, C.L. Principles of Behavior, New York: Appleton-Century, 1943.

JAMES, W. What is emotion? Mind, 1884, 9, 188 - 205.

JAMES, W. The Principles of Psychology, Volume II, New York: Henry Holt, 1890.

KAMMEYER, K. Birth order as a research variable. Social Forces, 1967-68, 46, 71 - 80.

KOCH, H. Attitudes of young children toward their peers as related to certain characteristics of their siblings. Psychological Monographs, 1956, 70, 19.

LINN, M.W. Perceptions of childhood: present functioning and past events. Journal of Gerontology, 1973, 28, 202 - 206.

MANDLER, G. and COWEN, J. Test anxiety questionnaire. Journal of Consulting Psychology, 1958, 22, 228 - 229.

MAY, R. The Meaning of Anxiety, New York: The Ronald Press Co., 1950.

MEREDITH, G.M. and MEREDITH, C.G. Acculturation and personality among Japanese-American college students in Hawaii. Journal of Social Psychology, 1966, 68, 175 - 182.

MOOTZ, J.A. Academic and biographical factors related to anxiety among married male graduate students. Dissertation Abstracts, 1973, 33, 7A, 3301.

MURPHY, H.B.M. Two stress measures in three cultures: their prognostic efficiency, significance and incongruities. Paper read at the conference Psychological Stress Measures, Montreal, 1971.

MURRAY, H.A. and KLUCKHOHN, C. Outline of a conception of personality. In Kluckhohn, C. edition. Personality, Nature, Society and Culture, 2nd Ed., New York: Alfred Knopf, 1956.

MUSSEN, P.H., CONGER, J.J. and KAGAN, J. Child Development and Personality, 2nd Ed., New York: Harper and Row, 1963.

PAVLOV, I.P. Conditioned Reflexes, London: Oxford University Press, 1927.

PULVINO, C.J. and HANSEN, J.C. Relevence of "needs" and "press" to anxiety, alienation and G.P.A. Journal of Experimental Education, 1972, 40 (3), 70 - 75.

RICKLES, N.K. Management of Anxiety for the General Practitioner, Illinois: Thomas, 1965.

ROBERTSON, A. Social class difference in the relationship between birth order and personality development. Social Psychiatry, 1971, 6 - 4, 172 - 178.

SCHACTER, S. The Psychology of Affiliation, Stanford: Stanford University Press, 1959.

SCHACTER, S. Birth order and sociometric choice. Journal of Abnormal and Social Psychology, 1964, 68 - 4, 453 - 456.

SEARS, R.R. Ordinal position in the family as a psychological variable. American Sociological Review, 1950, 15, 397 - 401.

SPIELBERGER, C.D. Anxiety and Behavior, New York and London: Academic Press, 1966.

STAPLES, F.R. and WALTERS, R.H. Anxiety, birth order, and susceptibility to social influence. Journal of Abnormal Social Psychology, 1961, 62, 716 - 719.

TAFT, L.M. A study to determine the relationship of anxiety to irrational ideas. An Unpublished Master's Thesis, University of Alberta, Edmonton, 1968.

TAYLOR, G. Personal communication to IPAT Test editor, July, 1966.

TAYLOR, J.A. A personality scale of manifest anxiety. Journal of Abnormal and Social Psychology, 1953, 48, 285 - 288.

TILLICH, P. The Courage To Be, New Haven: Yale University Press, 1968.

TISSUE, T. and WELLS, L. Antecedent life styles and old age. Psychological Reports, 1971, 29, 1100.

TOMAN, W. The Family Constellation, New York: Springer, 1961.

WHEELER, E.E. Anxiety, mental ability, and reported views of self. School Counselor, October, 1965, 33 - 35.

WHITE, R.W. The Enterprise of Living, New York: Holt, Rinehart and Winston, Inc., 1972.

WOLPE, J. Psychotherapy by Reciprocal Inhibition, Stanford: Stanford University Press, 1958.

WOLPE, J., SALTER, A. and REYNA, L.J. The Conditioning, New York: Holt, Rinehart and Winston, Inc., 1964.

WOOSTER, J.H. Attitudes toward poverty, social services and adherence to the protestant ethic in a rural Colorado community. Dissertation Abstracts, 1972, 33 (3-A), 1227 - 1228.

WRIGHTSMAN, L.S. Effects of waiting with others on changes in level of felt anxiety. Journal of Abnormal and Social Psychology, 1960, 61, 216 - 222.

APPENDIX

PLEASE CIRCLE OR FILL IN CORRECT RESPONSE

I AM MALE FEMALE

AGE: _____

SCHOOL: _____

NUMBER OF OLDER BROTHERS OR SISTERS: _____

NUMBER OF YOUNGER BROTHERS OR SISTERS: _____